

What is claimed is:

1. An apparatus for handwritten character font generation comprising:

5 a character image extraction section configured to extract character image data of handwritten characters filled into character entry boxes from image data scanned from a character entry sheet in which the handwritten characters are filled into the character entry boxes corresponding to respective character codes;

10 a character positional information storage section configured to store character positional information of font character space defined for each of characters;

a character positional information calculation section configured to calculate the amount of movement for moving
15 the extracted character image data to a character position of the font character space defined in the character positional information;

a character position alignment section configured to move the character image data to the character position of
20 the font character space defined in the character positional information, based on the calculated amount of movement; and

a character font generation section configured to generate font characters of the handwritten character font based on the moved character image data.

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2. The apparatus of claim 1, further comprising
a character circumscribed quadrilateral calculation
section configured to calculate a circumscribed quadrilateral
of a character portion of the character image data from the
5 extracted character image data, wherein:

the character positional information calculation
section calculates the amount of movement for moving the
calculated circumscribed quadrilateral to the character
position of the font character space defined in the character
10 positional information; and

the character position alignment section moves the
character image data to the character position of the font
character space defined in the character positional
information by moving the character portion of the character
15 image data based on the calculated amount of movement.

3. The apparatus of claim 2, wherein
the character positional information includes
information about a ratio of a top blank to a bottom blank
20 and a ratio of a left blank to a right blank of the circumscribed
quadrilateral in the font character space.

4. The apparatus of claim 1, wherein
the character positional information includes
25 information which defines position fiducial characters

corresponding to each of specific characters and information which defines a positional relation between each of the specific characters and each of the position fiducial characters respectively.

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5. The apparatus of claim 2, wherein

the character positional information includes information which defines position fiducial characters corresponding to each of specific characters and information which defines a positional relation between each of the specific characters and each of the position fiducial characters respectively.

6. The apparatus of claim 3, wherein

the character positional information includes information which defines position fiducial characters corresponding to each of specific characters and information which defines a positional relation between each of the specific characters and each of the position fiducial characters respectively.

7. The apparatus of claim 4, wherein

the specific characters includes voiced sound characters among Hiragana characters and Katakana characters, p-sound characters among Hiragana characters and Katakana

characters, and Roman numerals of a lower-case character.

8. The apparatus of claim 5, wherein

the specific characters includes voiced sound
5 characters among Hiragana characters and Katakana characters,
p-sound characters among Hiragana characters and Katakana
characters, and Roman numerals of a lower-case character.

9. The apparatus of claim 6, wherein

10 the specific characters includes voiced sound
characters among Hiragana characters and Katakana characters,
p-sound characters among Hiragana characters and Katakana
characters, and Roman numerals of a lower-case character.

15 10. A computer readable storage medium recording a program
for handwritten character font generation, the program
executing in a handwritten character font generation apparatus,
the program comprising:

extracting character image data of handwritten
20 characters filled into character entry boxes from image data
scanned from a character entry sheet in which the handwritten
characters are filled into the character entry boxes
corresponding to respective character codes;

calculating the amount of movement for moving the
25 extracted character image data to a character position of

font character space defined in character positional information;

moving the character image data to the character position of the font character space defined in the character positional information based on the calculated amount of movement; and
5 generating font characters of the handwritten character font based on the moved character image data.

11. The computer readable storage medium of claim 10 wherein
10 the program further comprising

calculating a circumscribed quadrilateral of a character portion of the character image data from the extracted character image data, wherein:

the amount of movement for moving the calculated
15 circumscribed quadrilateral to the character position of the font character space defined in the character positional information is calculated; and

the character image data to the character position of the font character space defined in the character positional
20 information by moving the character portion of the character image data is moved based on the calculated amount of movement.

12. The computer readable storage medium of claim 11 wherein
the character positional information includes
25 information about a ratio of a top blank to a bottom blank

and a ratio of a left blank to a right blank of the circumscribed quadrilateral in the font character space.

13. The computer readable storage medium of claim 10 wherein
5 the character positional information includes information which defines position fiducial characters corresponding to each of specific characters and information which defines a positional relation between each of the specific characters and each of the position fiducial
10 characters respectively.

14. The computer readable storage medium of claim 11 wherein
the character positional information includes information which defines position fiducial characters
15 corresponding to each of specific characters and information which defines a positional relation between each of the specific characters and each of the position fiducial characters respectively.

20 15. The computer readable storage medium of claim 12 wherein
the character positional information includes information which defines position fiducial characters corresponding to each of specific characters and information which defines a positional relation between each of the
25 specific characters and each of the position fiducial

characters respectively.

16. The computer readable storage medium of claim 13 wherein
the specific characters includes voiced sound
5 characters among Hiragana characters and Katakana characters,
p-sound characters among Hiragana characters and Katakana
characters, and Roman numerals of a lower-case character.

17. The computer readable storage medium of claim 14 wherein
10 the specific characters includes voiced sound
characters among Hiragana characters and Katakana characters,
p-sound characters among Hiragana characters and Katakana
characters, and Roman numerals of a lower-case character.

15 18. The computer readable storage medium of claim 15 wherein
the specific characters includes voiced sound
characters among Hiragana characters and Katakana characters,
p-sound characters among Hiragana characters and Katakana
characters, and Roman numerals of a lower-case character.

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19. A method for handwritten character font generation in
an apparatus for handwritten character font generation, the
method comprising:

extracting character image data of handwritten
25 characters filled into character entry boxes from image data

scanned from a character entry sheet in which the handwritten characters are filled into the character entry boxes corresponding to respective character codes;

calculating the amount of movement for moving the
5 extracted character image data to a character position of font character space defined in character positional information;

moving the character image data to the character position of the font character space defined in the character positional
10 information based on the calculated amount of movement; and

generating font characters of the handwritten character font based on the moved character image data.

20. The method of claim 19, further comprising

15 calculating a circumscribed quadrilateral of a character portion of the character image data from the extracted character image data, wherein:

the amount of movement for moving the calculated circumscribed quadrilateral to the character position of the
20 font character space defined in the character positional information is calculated; and

the character image data to the character position of the font character space defined in the character positional information by moving the character portion of the character
25 image data is moved based on the calculated amount of movement.